What we claim and desire to protect by letters patent:

1. An adsorption gas dryer having a first drying tower and a second drying tower each having a first port and a second port through which gas can pass into or out of the tower, a first manifold and a second manifold connected respectively to the first and the second ports of both towers, the manifolds each including integral gas passages, each port of the towers being in communication with a gas passage, and the manifolds each including at least one integral valve seat upon which a valve actuator is mounted to constitute a valve for controlling flow of gas through the gas passages wherein the second manifold has two exhaust valves for controlling purge gas.

2. An adsorption gas dryer as claimed in claim 1 in which the exhaust valves are arranged adjacent each other in the second manifold.

3. An adsorption gas dryer as claimed in claim 1 in which each manifold is formed as a casting.

4. An adsorption gas dryer as claimed in claim 3 in which the first manifold acts as a wet gas inlet and the second

manifold acts as the dry gas outlet.

5. An adsorption gas dryer as claimed in claim 4 in which the casting for each manifold is identical.

6. An adsorption gas dryer as claimed in claim 5 in which the position in the casting occupied by the exhaust valves in the second manifold is left vacant in the first manifold.

7. An adsorption gas dryer as claimed in claim 6 in which two cavities with no valves therein are present in the first manifold, these two cavities being joined by a gas passage through which purge gas can flow.

8. An adsorption gas dryer as claimed in claim 7 in which the first manifold has an aperture which provides an exit from the purge gas passage to the exterior of the manifold, this aperture being blocked off to ensure that the purge gas does not exit the manifold via the aperture.

9. An adsorption gas dryer as claimed in claim 8 in which the aperture is blocked off using a restriction element that restricts the flow of purge gas by a predetermined amount.

10. An adsorption gas dryer as claimed in claim 1 and comprising two similar towers, each having an upper and a lower port, and upper and lower manifolds, the upper part manifold being connected to the upper ports of both of the towers and the lower manifold being connected to the lower ports of both of the towers, the first manifold being the upper manifold and the second manifold being the lower manifold.

11. An adsorption gas dryer as claimed in claim 1 in which O-rings are located in nozzles of the towers to provide seals with the manifolds.

12. An adsorption gas dryer as claimed in claim 1 in which the exhaust valves are servo-controlled diaphragm valves.

13. An adsorption gas dryer as claimed in claim 12 in which the second manifold includes a shuttle valve to direct wet gas into the on-stream tower, the movement of the shuttle valve being controlled by the exhaust valves.

14. An adsorption gas dryer as claimed in claim 1 in which at least one of the manifolds includes a demand valve that comprises a spring-loaded piston, such that, only when the

gas pressure is sufficient, the spring is compressed and the piston is moved in the direction of the gas flow to allow it to enter a gas passage revealed only when the piston is depressed.

15. A connection block for connection to a manifold of an adsorption gas dryer as claimed in claim 1, the connection block comprising two sets of gas passages, each set forming a cruciform shape within the block, each set having up to three arms of the cruciform leading to an exit from the block, whilst the fourth arm of one set forms an inlet into the manifold and the fourth arm of the other set forms an outlet from the manifold.

16. A connection block as claimed in claim 15 and including additional gas passages leading to the exterior of the block branching off from the cruciform passages.